



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/300,676	04/27/1999	ROBERT DOYLE	73744	4753

24628 7590 04/22/2005

WELSH & KATZ, LTD  
120 S RIVERSIDE PLAZA  
22ND FLOOR  
CHICAGO, IL 60606

EXAMINER
----------

DEANE JR, WILLIAM J

ART UNIT	PAPER NUMBER
----------	--------------

2642

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/300,676

Applicant(s)

DOYLE ET AL

Examiner

William J Deane

Art Unit

2642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1- 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 5,828,747 (Fisher et al.).

With respect to claims 1, 14, 27 and 38, Fisher et al. teach a method of assigning agents of an automatic call distributor (ACD 101, Fig.1), to incoming call types handled by the ACD (note call queues 120, call vector 140 and Col. 3, lines 43 – 46), the method comprising:

determining a target occupancy matrix including a target occupancy for each agent for each call type of the plurality of call types (see Fig. 7). It should be noted that in Fisher et al., the call types correspond to agent skills (Col. 3, lines 34 – 38).

Therefore, if one provides a target occupancy based on agent skill one also has a target occupancy based on call type. If applicant argues this point, then the Examiner would argue that it would have been obvious to one of ordinary skill in the art, based on Fisher's disclosure of a target occupancy based on agent skill to have also provided a target occupancy based on call types because agent skills are equated to call types.

processing the call of a first type of the types determined in the target occupancy matrix; and assigning the call to an agent of the agents of the ACD with the largest

relative difference between an actual occupancy of calls of the first type handled by the agent and the target occupancy of calls of the first type determined for the agent in the target occupancy matrix. In particular, note target occupancy data 702 in Fig. 7 (see Abstract, Col. 2, lines 13 – 23, Col. 2, lines 41 – 51 and Col. 6, lines 9 - 19).

With respect to “the target occupancies among at least some of the agents are not equal” limitation, such if not inherent in Fisher et al. would have been obvious to one of ordinary skill in the art. If agents have different skill levels within a defined skill, certainly it would be obvious that one would not expect the same target occupancies for agents of different skill levels. See Col. 3, lines 49 – 56.

With respect to the “one pool” aspect of the claim limitation, note Col. 3, line 62 – Col. 4, line 3.

With respect to claims 2, 15 and 28, and semi-permanent data (agent proficiency) note Col. 3, lines 54 – 56. With respect to permanent data (skill types) note Col. 3, lines 36 – 42. With respect to variable data (target total agent occupancy for each agent) note Col. 5, lines 15 – 34 and Fig. 7. In addition, compare Page 8, lines 7 – 22 of the instant application with Figs. 2 and 7, Col. 3, line 36 – Col. 4, line 12 and Col. 5, lines 15 – 34 of the Fisher et al. reference.

With respect to claims 3 - 4, 11, 16 - 17 and 29 - 30, note permanent data (skill types) in the target matrix in Fig. 7. In addition, compare Page 6, lines 10 – 17 of the instant application with Col. 2, lines 1 – 4 of the reference.

With respect to claims 5 - 6, 18 – 19 and 31 – 32, note Fig. 2, Col. 3, lines 54 – 56 and Col. 4, lines 4 – 7 and lines 37 - 42.

Art Unit: 2642

With respect to claims 7, 20 and 30, note Col. 5, lines 21 – 24. Since the data 700 – 701 is pre-administered, the examiner believes this data is manually entered.

With respect to claims 8 – 14, 21 – 26 and 31 - 37, note Col. 2, lines 53 – 57, Col. 3, lines 51 – 56, Col. 4, line 57 – Col. 5, line 51. It should be noted that the target matrix includes, among other things actual occupancies, target occupancies, skills and levels of skills. Through the above Cols., it is clear that at least the actual occupancies change and therefore, the target matrix changes. With respect to a call processor, note that call vector 140. With respect to the call matrix processor, note call-distribution function 150.

With respect to the repair processor, as best as can be determined, the repair processor concerns itself with iteratively changing the target matrix to actual occupancy in line with the target matrix (that is what Fisher does, see Abstract)

With respect to the selection processor, as best as can be determined, it appears that this processor selects agents based on skill or other data (note agent queues 130).

The objective function processor determines the effect of call allocation on the target matrix, such is taught by Fisher et al. (see Fig. 6).

With respect to the call distributor, note ACD 150.

### ***Response to Arguments***

Applicant's arguments filed 11/15/2004 have been fully considered but are not deemed persuasive to any error in the rejection above.

With respect to applicants' argument on page 12 regarding a single pool, please note Col. 3, line 62 – Col. 4, line 3, as noted above.

Art Unit: 2642

With respect to applicants' argument on page 13 and 14, equity is subjective. If there is only one queue and the skill level of the agent are different, then obviously some agents are more knowledgeable or work quicker or ... Therefore, equity may mean that the agents spend the same amount of time answering calls. However, and obviously, an agent with a low skill level may spend the same amount of time on the phone, but will not talk to as many callers as a more skilled agent during the same amount of time. So where is the equity? If two agents are highly skilled and another agent's skill level is low, then the limitation "where the target occupancies among at least some of the agents are not equal" is satisfied by Fisher et al. Again, note that Fisher et al contemplate the possibility of only one queue.

### ***Conclusion***


**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2642

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bill Deane whose telephone number is (571) 272-7484. In addition, facsimile transmissions should be directed to Bill Deane at facsimile number (703) 872-9306.

16Apr05

  
WILLIAM J. DEANE, JR.  
PRIMARY EXAMINER